

SEARCH NOTES FOR SERIAL NUMBER: 10/593539

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PRIORITY

Parent Data

10593539, filed 09/19/2006

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Also: foreign priority claimed to JP 2005-021627 1/28/2005 (not in PALM; see oath)

PGPUB US20070194978A1

342	028000	Y
342	070000	
342	198000	
342	192000	

IDS – 2, including search report

PLUS SEARCH

6/26/2008  
- submitted

PALM INVENTOR SEARCH

6/26/2008

Last Name = TESHIROGI

First Name = TASUKU

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>06365265</u>	<u>4584581</u>	150	04/05/1982	BEAM FORMING NETWORK FOR MULTIBEAM ARRAY ANTENNA	TESHIROGI, TASUKU
<u>06550120</u>	<u>4543579</u>	150	11/09/1983	CIRCULAR POLARIZATION ANTENNA	TESHIROGI, TASUKU
<u>09554470</u>	<u>6317095</u>	250	05/11/2000	PLANAR ANTENNA AND METHOD FOR	TESHIROGI, TASUKU

				MANUFACTURING THE SAME	
<u>09741276</u>	<u>6489930</u>	150	12/19/2000	DIELECTRIC LEAKY-WAVE ANTENNA	TESHIROGI, TASUKU
<u>10009396</u>	<u>6597323</u>	250	10/22/2001	DIELECTRIC LEAKY WAVE ANTENNA HAVING MONO-LAYER STRUCTURE	TESHIROGI, TASUKU
<u>10398333</u>	<u>6839032</u>	150	04/03/2003	PORTABLE RADIO TERMINAL TESTING APPARATUS USING SINGLE SELF-COMPLEMENTARY ANTENNA	TESHIROGI, TASUKU
<u>10471942</u>	<u>6995724</u>	150	09/15/2003	WAVEGUIDE SLOT TYPE RADIATOR HAVING CONSTRUCTION TO FACILITATE MANUFACTURE	TESHIROGI, TASUKU
<u>10582067</u>	Not Issued	19	01/01/0001	Short range radar small in size and low in power consumption and controlling method thereof	TESHIROGI, TASUKU
<u>10585832</u>	Not Issued	20	07/12/2006	Circularly Polarized Antenna and Radar Device Using the Same	TESHIROGI, TASUKU
<u>10593055</u>	Not Issued	19	01/01/0001	Short range radar and method of controlling the same	TESHIROGI, TASUKU
<u>10593539</u>	Not Issued	30	09/19/2006	Uwb short-range radar	TESHIROGI, TASUKU
<u>11631426</u>	Not Issued	19	01/01/0001	Dielectric leaky wave antenna	TESHIROGI, TASUKU
<u>11794872</u>	Not Issued	30	07/05/2007	Linearly Polarized Antenna and Radar Apparatus Using the Same	TESHIROGI, TASUKU
<u>11989274</u>	Not Issued	19	01/01/0001	Short-range radar and control method thereof	TESHIROGI, TASUKU

Last Name = SAITO

First Name = SUMIO

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>07757311</u>	<u>5218061</u>	150	09/10/1991	PARTIALLY POST-GLYCIDYLATED EPOXY RESIN, EPOXY RESIN COMPOSITION AND CURED PRODUCT THEREOF	SAITO, SUMIO
<u>07764158</u>	<u>5210712</u>	150	09/20/1991	WAVEFORM SHAPING CIRCUIT AND DIGITAL SIGNAL ANALYZING APPARATUS USING THE SAME	SAITO, SUMIO
<u>10562988</u>	Not Issued	80	12/28/2005	Radar oscillator capable of preventing leak of oscillation output	SAITO, SUMIO
<u>10579385</u>	Not Issued	30	05/11/2006	Digital Signal Offset Adjusting Apparatus and Pulse Pattern	SAITO, SUMIO

				Generator Using the Same	
<u>10588871</u>	Not Issued	61	08/10/2006	Radar oscillator	SAITO, SUMIO
<u>10588910</u>	Not Issued	93	08/09/2006	HIGH-FREQUENCY ELECTRONIC SWITCH, AND BURST WAVE GENERATING DEVICE USING THE SAME AND SHORT RANGE RADAR USING THE SAME	SAITO, SUMIO
<u>10593539</u>	Not Issued	30	09/19/2006	Uwb short-range radar	SAITO, SUMIO
<u>06296729</u>	<u>4383057</u>	150	08/27/1981	PROCESS OF PREPARING COATING COMPOSITIONS COMPRISING POLYVINYL BUTYRAL AND COLLOIDAL SILICA	SAITOH, SUMIO
<u>06343920</u>	<u>4499217</u>	150	01/29/1982	THERMO-SETTING RESINOUS LIQUID COMPOSITIONS	SAITOH, SUMIO
<u>06469677</u>	Not Issued	161	02/25/1983	COATING COMPOSITIONS	SAITOH, SUMIO
<u>06821082</u>	<u>4721652</u>	150	01/21/1986	COMPOSITE FOR DECOMPOSING AND ADSORBING UREA DISSOLVED IN LIQUID	SAITOH, SUMIO

Last Name = UCHINO

First Name = MASA HARU

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>09314346</u>	<u>6509728</u>	150	05/19/1999	SPECTRUM ANALYZER HAVING FUNCTION OF DISPLAYING AMPLITUDE PROBABILITY DISTRIBUTION EFFECTIVELY	UCHINO, MASA HARU
<u>09777437</u>	<u>6681235</u>	150	02/06/2001	FREQUENCY SYNTHESIZER AND GAUSSIAN NOISE GENERATOR USING THE SAME	UCHINO, MASA HARU
<u>09890441</u>	<u>7206339</u>	150	07/25/2001	WONDER GENERATOR, DIGITAL LINE TESTER COMPRISING THE SAME, AND PHASE NOISE TRANSFER CHARACTERISTIC ANALYZER	UCHINO, MASA HARU
<u>10469224</u>	<u>6909270</u>	150	08/27/2003	PHASE DETECTOR CAPABLE OF DETECTING AN ACCUMULATED VALUE OF PHASE DISPLACEMENT AT A HIGH SPEED AND FREQUENCY	UCHINO, MASA HARU

				STABILITY MEASURING APPARATUS FOR ARBITRARY NOMINAL FREQUENCY USING THE SAME	
<u>10548400</u>	<u>7248205</u>	150	09/08/2005	RADAR APPARATUS	UCHINO, MASA HARU
<u>10581935</u>	Not Issued	93	06/07/2006	SMALL-SIZED LOW-POWER DISSIPATION SHORT-RANGE RADAR THAT CAN ARBITRARILY CHANGE DELAY TIME BETWEEN TRANSMISSION AND RECEPTION WITH HIGH TIME RESOLUTION AND METHOD OF CONTROLLING THE SAME	UCHINO, MASA HARU
<u>10593539</u>	Not Issued	30	09/19/2006	Uwb short-range radar	UCHINO, MASA HARU
<u>11365993</u>	Not Issued	30	03/01/2006	Signal measuring/analyzing apparatus and signal measuring/analyzing method	UCHINO, MASA HARU
<u>11683313</u>	Not Issued	71	03/07/2007	WANDER GENERATOR, AND DIGITAL LINE TESTER AND PHASE NOISE TRANSFER CHARACTERISTIC ANALYZER USING THE SAME	UCHINO, MASA HARU

Last Name = EJIMA

First Name = MASANORI

Application#	Patent#	Status	Date Filed	Title	Inventor Name
<u>10562988</u>	Not Issued	80	12/28/2005	Radar oscillator capable of preventing leak of oscillation output	EJIMA, MASANORI
<u>10588871</u>	Not Issued	61	08/10/2006	Radar oscillator	EJIMA, MASANORI
<u>10593539</u>	Not Issued	30	09/19/2006	Uwb short-range radar	EJIMA, MASANORI

## IEEE SEARCH

7/7/2008

teshirogi t.

UWB Radar RF Front-End to Mitigate Impacts on EESS and Radio Astronomy  
Teshirogi, T.; Ejima, M.; Uchino, M.; Saito, S.; Kawamura, T.; Arayashiki, Y.; Sakamoto, Y.; Yoshida, T.;  
Watanabe, Y.; Ishida, A.;  
Ultra-Wideband, The 2006 IEEE 2006 International Conference on

Sept. 2006 Page(s):287 - 291  
Digital Object Identifier 10.1109/ICU.2006.281564

UWB automotive radar to mitigate impact on radio services using restricted band  
Teshirogi, T.; Ejima, M.; Uchino, M.; Saito, S.; Kawamura, T.; Arayashiki, Y.; Sakamoto, Y.; Yoshida, T.;  
Watanabe, Y.; Ishida, A.;  
Microwave Conference Proceedings, 2005. APMC 2005. Asia-Pacific Conference Proceedings  
Volume 1, 4-7 Dec. 2005 Page(s):4 pp.  
Digital Object Identifier 10.1109/APMC.2005.1606193

((gresham i.)<in>au ) <and> ultra

Ultra-wideband radar sensors for short-range vehicular applications  
Gresham, I.; Jenkins, A.; Egri, R.; Eswarappa, C.; Kinayman, N.; Jain, N.; Anderson, R.; Kolak, F.; Wohler, R.;  
Bawell, S.P.; Bennett, J.; Lanteri, J.-P.;  
Microwave Theory and Techniques, IEEE Transactions on  
Volume 52, Issue 9, Part 1, Sept. 2004 Page(s):2105 - 2122  
Digital Object Identifier 10.1109/TMTT.2004.834185

7/9/2008

(uwb <or> ultra) <and> ((restricted <or> prohibited) <sentence> band)

Quasi-Millimeter-Wave UWB Bandpass Filter with Sharp Notch at Restricted Band  
Li, Keren; Nomura, Taro;  
Millimeter Waves, 2008. GSMM 2008. Global Symposium on  
21-24 April 2008 Page(s):2 - 5  
Digital Object Identifier 10.1109/GSMM.2008.4534541

(uwb <or> ultra) <and> (eess)

Interference from 24-GHz automotive radars to passive microwave earth remote sensing satellites  
Younis, M.; Maurer, J.; Fortuny-Guasch, J.; Schneider, R.; Wiesbeck, W.; Gasiewski, A.J.;  
Geoscience and Remote Sensing, IEEE Transactions on  
Volume 42, Issue 7, July 2004 Page(s):1387 - 1398  
Digital Object Identifier 10.1109/TGRS.2004.830633

(uwb <or> ultra) <and> srr

Technology development of short range ultrawide-band radar system  
Ogawa, H.; Hamaguchi, K.; Yamamoto, Y.; Hirose, T.; Kobayashi, T.; Kohno, R.  
Ultra Wideband Systems, 2004. Joint with Conference on Ultrawideband Systems and Technologies. Joint  
UWBST & IWUWBS, 2004 International Workshop on  
18-21 May 2004  
Page(s): 351- 355  
Digital Object Identifier 10.1109/UWBST.2004.1320994

Automotive radar - status and perspectives  
Wenger, J.  
Compound Semiconductor Integrated Circuit Symposium, 2005. CSIC '05. IEEE  
30 Oct.-2 Nov. 2005  
Page(s): 4 pp.-  
Digital Object Identifier 10.1109/CSICS.2005.1531741

(notch <and> filter <and> band <and> (uwb <or> ultra)

A parametric study of band-notched UWB planar monopole antennas  
 Kerkhoff, A.; Hao Ling;  
Antennas and Propagation Society International Symposium, 2004. IEEE  
 Volume 2, 20-25 June 2004 Page(s):1768 - 1771 Vol.2  
 Digital Object Identifier 10.1109/APS.2004.1330540

Metamaterial Resonator Based Wave Propagation Notch for Ultra-wide Band Filter Applications  
 Ali, A.; Hu, Z.;  
Antennas and Wireless Propagation Letters, IEEE : Accepted for future publication  
 Volume PP, Forthcoming, 2003 Page(s):1 - 1  
 Digital Object Identifier 10.1109/LAWP.2008.920964

## INSPEC SEARCH

7/7/2008

No.	Database	Search term	Info added since	Results	
CP		[Clipboard]		0	-
1	INZZ	teshirogi-t\$	unrestricted	73	<a href="#">show titles</a>
2	INZZ	saito-s\$	unrestricted	2383	<a href="#">show titles</a>
3	INZZ	uchino-m\$	unrestricted	46	<a href="#">show titles</a>
4	INZZ	ejima-m\$	unrestricted	24	<a href="#">show titles</a>
5	INZZ	arayashiki-y\$	unrestricted	10	<a href="#">show titles</a>
6	INZZ	1 OR 2 OR 3 OR 4 OR 5	unrestricted	2520	<a href="#">show titles</a>
7	INZZ	6 AND oscillator	unrestricted	35	<a href="#">show titles</a>

### Title

UWB radar RF front-end to mitigate impacts on EESS and radio astronomy.

### Conference information

2006 IEEE International Conference on Ultra-Wideband, Waltham, MA, USA, 24-27  
Sept. 2006.

### Source

2006 IEEE International Conference on Ultra-Wideband (IEEE Cat. No. 06EX1275),  
 2006, p. 6 pp., 10 refs, pp. CD-ROM, ISBN: 1-4244-0101-1.  
 Publisher: IEEE, Piscataway, NJ, USA.

### Author(s)

Teshirogi-T., Ejima-M., Uchino-M., Saito-S., Kawamura-T., Arayashiki-Y., Sakamoto-Y., Yoshida-T., Watanabe-Y., Ishida-A.

### Author affiliation

Teshirogi, T., Ejima, M., Uchino, M., Saito, S., Kawamura, T., Arayashiki, Y., Anritsu Corp., Kanagawa, Japan.

### Abstract

A novel UWB short-range radar (SRR) which effectively mitigates its impacts on radio services using the restricted band such as radio astronomy or Earth Exploring Satellite Service is introduced. The essential components, a burst oscillator generating no carrier leak, and antennas with notch-filtering function are presented in detail. Other key MMICs, such as a high-speed square-law detector, variable gain LNA, a sample-hold circuit, etc. are also described with the performances of the SRR.

### Title

Development of automotive UWB radar to reduce impact on radio services in restricted band.

Source

Anritsu Technical Bulletin, { Anritsu-Tech-Bull-Japan} , Sept. 2006, no. 83, p. 52-8, 13 refs, CODEN: ANTKAE, ISSN: 0003-5211.  
Publisher: Anritsu Electr. Co, Japan.

Author(s)

Kawamura-T., Teshirogi-T., Ejima-M., Arayashiki-Y., Saito-S.

Abstract

Development of automotive short-range radar using ultra-wideband (UWB) technology in the quasi-millimeter-wave band is progressing worldwide. However, this band includes the restricted band for protecting radio services, such as passive sensors for the Earth Exploring Satellite Service (EESS), or radio astronomy. Consequently, technologies are needed to reduce the impact of UWB radar on passive radio services and permit coexistence. In December 2004, the FCC revised the rules and prescribed a new spectrum mask. We have developed a novel UWB SRR that complies with the new mask by using a carrier-leak-free burst oscillator and planar antenna with notch filtering. We also have developed several key MMICs, such as a square-law detector with high-speed operation, variable-gain LNA, low-droop sample-hold circuit, etc., which are essential for building a simple UWB.

Title

Residual-carrier-free burst oscillator for automotive UWB radar applications.

Source

Electronics Letters, { Electron-Lett-UK} , 28 April 2005, vol. 41, no. 9, p. 535-6, 6 refs, CODEN: ELLEAK, ISSN: 0013-5194.  
Publisher: IEE, UK.

Author(s)

Teshirogi-T., Saito-S., Uchino-M., Ejima-M., Hamaguchi-K., Ogawa-H., Kohno-R.

Author affiliation

Teshirogi, T., Saito, S., Uchino, M., Ejima, M., Core Technol. R&D Center, Anritsu Corp., Atsugi, Japan.

Abstract

The design and performance of an MMIC burst oscillator that oscillates only while the driving pulse is applied are described. Since it does not generate carrier leak, a UWB radar using this oscillator may effectively mitigate interference with services using the restricted frequency band by locating its spectrum sufficiently far from the band.

8	INZZ	kawamura-t\$	unrestricted	1113	<a href="#">show titles</a>
9	INZZ	8 AND uw b	unrestricted	5	<a href="#">show titles</a>

Title

UWB radar antenna with emission notch in restricted frequency band.

Conference information

ISAP'05 - International Symposium on Antennas and Propagation, Seoul, South Korea, 3-5 Aug. 2004.

Source

Proceedings of the 2005 International Symposium on Antennas and Propagation (ISAP 2005), 2005, vol.3, p. 941-4 vol.3, 5 refs, pp. 3 vol xxx+ 1288, ISBN: 89-86522-77-2.  
Publisher: Korea Electromagnetic Engineering Society, Seoul, South Korea.

Author(s)

Kawamura-T., Yamamoto-A., Umeda-H., Teshirogi-T.

Author affiliation

Kawamura, T., Yamamoto, A., Umeda, H., Teshirogi, T., Core Technol. R&D Center, Anritsu Corp., Kanagawa, Japan.

Abstract

The development of a novel planar antenna for automotive radars is discussed in this paper. The  $2 \times 4$ -element array antenna composed of rimmed-cavity-back spiral antennas achieved a gain of more than 14 dBi over the specified frequency band. A notch for emission rejection in the restricted band was effective in mitigating interference. In addition, the antenna has excellent polarization isolation characteristics by using the sequential-rotation-array technique, which is useful for automotive radars.

GOOGLE

6/30/2008

“burst oscillator”

Residual-carrier-free burst oscillator for automotive UWB radar applications

Teshirogi, Saito, Uchino, Ejima, Hamagucki, Ogawa, Kohno

2/16/2005